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ABSTRACT

This case study highlights how one rural elementary school, where teachers had expressed interest in changing how things were done, provided opportunities for teachers to transform traditional teaching practices into innovative ones. This involved implementing an accelerated schools philosophy (using gifted and talented strategies for all students, even though 98 percent were low-income) and using the inquiry process to redesign and implement innovative teaching practices. Data collection involved interviews with and observations of six teachers and the principal. Interviewees discussed what they had learned from the inquiry process and what they learned about teachers, students, the administrator, parents, and the school's curricular and instructional processes. As teachers worked through 4 years of the accelerated schools process, there was evidence of changing patterns in the areas of curriculum and instruction through problem solving. Realizing their strength as innovators, teachers became willing to reflect, share, and work more collaboratively. The inquiry process helped teachers gain a better understanding of the internal and external challenges they faced. Through more effective use of problem solving, major school-wide changes in curriculum, instruction, and organization were designed and implemented, with a focus on teaching and learning that incorporated the arts. (Contains 21 references.) (SM)

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The Use of the Inquiry Process to Redesign and Implement Innovative Teaching Practices

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THE USE OF THE INQUIRY PROCESS TO REDESIGN AND IMPLEMENT INNOVATIVE TEACHING PRACTICES

INTRODUCTION

As the new millennium becomes a reality, we as educators see society changing fundamentally and rapidly. As society changes, educators must adopt and fit into the present, as well as project ourselves into the future. In doing so, Ornstein and Levine (2000) purport, "We look to the schools to help us cope with the climate of change. As a society, we react to change and social pressures by revising our educational purposes and the schools respond by changing their programs (p. 425).

As a result of such change, traditional teaching strategies change to non-traditional ones in educational programs. The context in which non-traditional teaching strategies may transform pedagogy is predicated on how teachers respond to forces of society that are both internal and external to the classroom setting. However, change needs to be a fundamental one and not merely just an incremental shift in practice. Cuban (1992) distinguishes between the two kinds of changes in the following manner: 1) "The premise behind incremental reform is that basic institutional structures are sound but need tinkering to remove defects and make their operations more effective and efficient...," and 2) "The premise behind fundamental reforms is that basic structures are irremediably flawed and need a complete overhaul, not renovations..." (p. 289).

Such a process of fundamental transformation may result in more cooperative attitudes among teachers, as well as in the more active involvement of students with learning through the use of innovative and creative strategies. The voice of Darling-Hammond (1993) resonates on the focus of educators building the capacity of schools and teachers to undertake teaching strategies

not previously pursued. That is, Darling-Hammond challenges educators to rethink their practice and redesign their schools by investing in individual and organizational empowerment that results in changes in the everyday instructional decisions about teaching. Such decisions then translate into new ways to more actively involve students and giving them a voice in decision making about their own learning (Newman, 1998). Kellough and Kellough (1999) view such ways as varied, diverse, and innovative.

This paper is directed toward painting a portrait of how teachers may transform their work in the social context of an accelerated schools classroom. The findings of this case study address issues of how one rural southern school, Harper Elementary, through the impact of internal and external forces provided the opportunities for teachers to move toward taking risks to transform traditional teaching practices to innovative ones. Such practices then became the wedge for transformation in the classroom. The avenue for such transformation was the process of implementing an accelerated schools philosophy (using gifted and talented strategies for all children, including those labeled as "at-risk") and the inquiry process to emphasize creative activities, including the arts.

The assumption of the Accelerated Schools Project is that through systematic problem solving, called the inquiry process, the school as a community is enabled to work together to utilize everyone's strengths, talents, interests, and backgrounds in developing unique solutions. As Levin (1991) noted, "The inquiry approach reflects the philosophy of John Dewey who advocated the development of schools as democratic communities that established their activities through systematic inquiry and participation by the 'citizens' of the school" (p. 3).

To accomplish this goal, the staff develops a shared set of values that are consciously brought into daily activities. A sense of trust is developed that encourages experimentation, discovery, and risk-taking. In addition, a culture is created that promotes the participation of all staff, including teachers (Hopfenberg, et al., 1993).

This participatory culture is maintained through a governance structure that involves committees, called cadres, on which all teachers serve. The cadres help shape major decisions affecting students and the instructional program. Cadre work is deliberate and relies on a systematic process to solve identified problems. For the process to work properly, the principal must use a facilitative leadership style. When these elements are in place, every teacher at the school becomes actively involved in decision making, with some teachers developing into informal teacher leaders.

The school was chosen for this study because the teachers expressed an interest in changing the way things were done. Once they became involved in the Accelerated Schools Project, particularly the inquiry process, many of the teachers turned toward creative and artistic activities as ways to meet the needs of the students. The questions addressed by the researchers reflected the relations of teacher-to-teacher during the process of change and how teachers responded to the less rigid structuring of the school due to a new administrator who facilitated the teachers in their quest for more productive and creative teaching.

This qualitative portrait exhibited that the willingness of teachers to open doors for dialogue, reflection, and innovation in the context of the accelerated schools workplace resulted in breaking down the barriers of isolation among teachers. Thereby, working together they were enabled to engage in a creative inquiry process that created fundamental restructuring and refining

of pedagogical skills. Murphy (1991) purports that such a transformation is embedded in the notion that teachers have the opportunities to redesign their classrooms as workplaces of innovation.

In summary, this paper examined the evidence that a fourth year accelerated school involved in the inquiry process has developed the capacity to implement and practice decision making. The organization of the paper includes a description of the research approach; a discussion of themes that emerged from the analysis interviews; a concluding section that looks at internal and external forces; and finally implications for future educators.

THEORETICAL FRAMEWORK

In the ongoing revisions, modifications, and changes in educational priorities, basic philosophies and theories play an important role in our classrooms. Certain periods of time in society during the 20th century have been dominated by particular philosophical and theoretical approaches. Such approaches have had an impact on teaching strategies. Some of these approaches have stifled creativity in teaching due to authoritative and controlling practices of principals and central offices. However, in the accelerated schools philosophy the focus is on empowering teachers to be risk takers and entrepreneurs for making decisions on what works best for a child-centered classroom.

Teachers in accelerated schools work in unity and build on their own strengths as well as the strengths of the students to create the most creative forms of teaching that meet the needs of the students. The nexus of this philosophy is that all students need to be taught ensuing gifted and talented types of strategies. So, today, as society has changed, the educational philosophy has also changed to provide the possibilities for innovative teaching with the teacher at the helm and

the principal as the facilitator. Greene (1991) predicts that such a situation breaks the crust or boundaries of traditional schooling.

As a result then the theoretical framework for this study of transformation in the teachers' workplace as well as their fundamental structure of teaching is informed primarily by the work of Cuban (1992), Dewey (1934), Levin (1994), and Murphy (1991). Internal forces such as the principal and colleagues of teachers need to be supportive of those teachers choosing to be different--choosing to use non-traditional strategies. In order for fundamental reform to occur within the context of the classroom, teachers need to be in a loosely knit organization where their ideas are respected so that they can devise innovative teaching strategies and implement those ideas in their practice. Teachers need to be provided with opportunities for active participation in the structure of the school to feel empowered to take risks, interact, share ideas, and develop innovative and active teaching strategies. In this way they will rely less on traditional strategies of lecture, textbooks, ditto sheets, and paper and pencil assignments. External forces such as central office, community, and financial support, as well as the support of school administrators, play key roles in how empowered teachers feel in order to take the necessary steps toward innovative practices.

Dewey (1934) views the context of the classroom as one in which the teacher engages students in active inquiry. The classroom then becomes a democratic community of learners engaged in hands-on activities while sharing and interacting with one another. Levin (1994) contends that teachers need to test out the waters to implement their beliefs regarding non-traditional strategies. Often, in the situation of large impersonal school systems, it is difficult for innovative teachers to implement their ideas about education when only traditional practices are

considered acceptable. Those factors that effect teachers' workplaces can limit or expand opportunities for teaching and thus impact student learning. According to Fullan and Steigelbauer (1991), administrators need to operate as facilitators for teachers. Cuban (1992) purports that where extensive reform of a school is called for, teachers, working with principals, need to become central to making decisions that shape curriculum content and pedagogical strategies.

Glickman, Gordon, and Ross-Gordon (1998) suggest that fundamental shifts in our view of education need to take shape if such transformation is to occur. Historically, there have been ingrained notions that schools were merely workplaces or factories where knowledge was delivered (Murphy, 1991). However, "The potential to dramatically alter our understanding of schooling is woven throughout transformation efforts embedded in this framework. To begin with, restructuring encompasses a basic change in our view of the relationship between the school and its environment" (Murphy, p. 17). Today, the real educational restructuring will require that teachers be the key players in shaping school-wide decisions as well as in determining the kinds of practices that align themselves with their belief about education and about themselves as competent professionals involved in the complicated and creative processes of educating young people. In such an environment teachers are leaders creating innovative strategies and the principal is content to be the facilitator and visionary.

RESEARCH APPROACH

The methodology for this paper involved conducting and analyzing interviews and observations of six teachers and a principal. Harper Elementary School houses grades pre-kindergarten through second. Approximately 98% of the students are on free/reduced lunch. Harper had participated as an accelerated school for four years at the time these data were

collected. The school was primarily comprised of at-risk students. The approach used for the interviews, the perspective used to analyze the interviews, and the limitations of the study are summarized below.

The Interview Approach

The interviews and observations were conducted during site visitations by the researchers. Interviewees were asked questions about what they had learned from the inquiry process--the process used to building an understanding of how the school can resolve problems and change. Each interviewee was asked what they had learned about teachers, students, the administrator, and parents, the school's curricular and instructional processes. From the analyses of their descriptions of specific events and situations, we assessed the teachers involvement to transform teaching.

This paper is intended to document the foundation that was being built in the inquiry process and learning the meaning of empowerment coupled with responsibility to eventually transform teachings. The teachers interviewed were somewhat anxious at the onset of the questioning. Once the interviews started, virtually every interviewee spoke openly, honestly, and sincerely. Many observed that it was a beneficial opportunity for them to express their concerns, anxieties, as well as excitement about what is happening in their school because of the accelerated schools process.

Analytic Perspective

This paper on transformation resulting in innovation of teaching develops a portrait of six teachers at the beginning level of a metamorphosis. The portrait, while conveying descriptions of people, provides information about the feelings and experiences of teachers in their struggles and

successes to change the traditional teaching environment to an accelerated one. According to Eisner (1991), the concept of the portrait in qualitative research can provide new understandings and insights into the educational setting. Through Eisner's methodology of qualitative research as inquiry, researchers learn that they become connoisseurs to see the total picture of what is transpiring in the school and classroom to understand, interpret, and descriptive thoughts, events, and feelings.

Thus, the present study started with a dual focus. On the one hand, as researchers we were interested in finding out about what teachers and principal were learning and how they were experiencing the inquiry process as a way to transform teaching practices. On the other hand, as "artists" we attempted to start the analysis of interviews from a fresh perspective, without being biased. It is in this respect that Eisner's (1991) concept of a clean canvas was especially helpful. It allowed us to look afresh to see what themes emerged from the interviews.

Limitations of the Study

The study was not investigating specific causes and effects from the central office or other schools. However, many responses did indicate that changes were beginning to occur because of the inquiry process. Action plans were developed and implemented through the inquiry process of the Accelerated School Project for the purpose of creating change specifically in the instructional component of the school.

FINDINGS

Setting.

Harper Elementary School is located in a progressive public school district that provides comparatively high salaries and good working conditions. The teaching staff at the school

includes 25 classroom teachers, and a number of support staff. The 440 students come from low-SES families.

Prior to implementation of the accelerated schools process, Harper was a dysfunctional school that had received a mix of students and teachers from other schools through a district reorganization. These other schools served communities that were sometimes bitter rivals. The bureaucratic leadership style of the principal accentuated divisions among faculty.

As the teachers worked through four years of the accelerated schools process, evidence of changing patterns were seen in the areas of curriculum and instruction through problem-solving. Realizing their strength as innovators, especially in the arts, teachers developed a willingness to reflect, share, and work on a more unified basis. Utilizing the accelerated schools' inquiry process, the teachers gained a better understanding of the challenges they faced internally from within the school and externally from outside the school.

Through the inquiry process the teachers begun transformations in the following two ways: First, internally (a) isolated events and programs turned into a holistic curriculum for more effective instruction, and (b) the teachers came together as formal cadres to use the inquiry process more effectively to make organizational changes. Second, externally, (a) teachers and the central office worked together as inservices become available to reinforce classroom innovation and (b) local business donated time and resources to help ensure the future success of the students.

The most significant change in the school-wide organization the school was the evolution of teachers' work using inquiry more carefully and effectively in their cadres and school-wide meetings to make changes in the curriculum and instruction over the four years. Initially, the

overall perception by teachers towards both the Accelerated Schools Project as a whole and the inquiry process was confusing. As one teacher stated, "When we first entered into the Accelerated Schools Project, it was unclear which direction we were going. We weren't sure of how we were going to get there. But as the years progressed, it began to run very smoothly." Another teacher commented, "We felt stupid when we first got in the project." However, as time went on and teachers began to mend wounds of dissension; teachers met with one another and began to understand one another as they reflected more on the value of inquiry at the personal and school levels. As one teacher observed, "The biggest impact of [the Accelerated Schools] is how we have learned to deal with problems and management of yourself."

The teachers saw the inquiry process and the cadre meetings of the Accelerated Schools Project as a major influence. As a result, the teachers have had an impact on finding alternative strategies for teaching and learning. In the words of one teacher, "We stop and think about what we can do. Before we just thought something was a problem and today we stop to think because maybe it's not." Another teacher said, "The Accelerated Schools Project has impacted us is in problem-solving. Instead of jumping to conclusions, we will give it thought on how to approach the problem--kids or teachers."

This statement was overwhelmingly resounded by others. For example, as one teacher recalled: "Before [accelerated schools] we used to jump to conclusions. [Now] we think first. We get a lot done in smaller groups or cadres. We take time. We can concentrate." Concurring, other teachers responded, "Before [accelerated schools] we always tend to jump to conclusions" and, "Instead of jumping to conclusions, we give thought on the approach to the problem."

Teachers' new success with inquiry also encouraged them to meet despite the fact that some thought there were too many cadre meetings. As one teacher observed, "There are too many meetings, but I feel they are necessary. Through meetings we've come to realize that we have to respect children as individuals."

The accelerated schools model facilitated the principal and teachers in organizing the cadre, steering committee, and school-wide meetings. The process provided opportunities for teachers and the principal to become aware of each other's attitudes, beliefs, behaviors, and ideas, with a school-wide vision in mind. Reflection, collaboration, and making decisions focused on the children, teaching, and learning. Therefore, the teachers became more effective to do research as they began to use problem-solving to carefully think though challenges and find alternative solutions before selecting the first answer that came to mind; the use of the inquiry process encouraged teachers to meet and dialogue.

Freire (1973) suggests that dialogue can play an important role as a starting point for organizing a program of education. Dialogue allows educators to look critically at what they are doing as they become aware of their situation in order to make changes. Freire's perspective is a crucial element in empowerment because it "....enables individuals and groups to more powerfully act on and change teaching and schooling" (p. 85).

Finally, through a more effective use of problem-solving, major school-wide changes in curriculum, instruction, and organization were designed and implemented with a focus on teaching and learning that incorporated the arts. In this way, teacher inquiry led to innovations that were not piecemeal but integrated and centered on a school-wide vision for change. Such a carefully thought-out approach to inquiry suggests that teachers were working together more as a

unit, rather than in isolated cliques in order to collaboratively share in decision-making in the best interest of the children.

CONCLUSIONS

Based on interviews and observations, the inquiry process at a school-wide level appeared to be in gear as teachers and the principal worked to make decisions in cadre, steering committee, and at school-wide meetings. Through teacher inquiry, organizational changes and improvements came from within the school community. Joyce and Calhoun (1995) purport that, "School renewal recreates the organization from within--through changes that support continuous examination and improvement of the education process at every level" (p. 51). Prior to the implementation of the accelerated schools model at the school, classroom and school-wide innovation was hindered because of the lack of administrative support, flexibility, and the lack of collegial inquiry. When cadre inquiry began to work at this school the process continued thus resulting in the creation of the school-wide programs that reflected a curriculum and instruction in transition. Such programs moved from isolated ones that had created rifts and gaps between children labeled as "gifted and talented" and those labeled as "at-risk" to integrated programs for all children. Franklin (1994) recommends Levin's accelerated schools concept as, "One of the most extensive efforts to accommodate at-risk children without segregation" (p. 144).

With respect to the curriculum and instruction, inquiry at the cadre level brought about the changes that involved children in the use of higher order thinking through a problem-solving process, encouraged creative and experiential thinking and integrated the use of language in many forms throughout the curriculum. Such activities were accomplished in the following five ways: First, and foremost, through taking stock--the initial milestone of the accelerated schools process

--art (visual art, drama, creative writing, music, and dance) was identified as a major strength in the classroom practices of teachers to build programs for the school. Second, innovation and creativity became more integrated throughout the classroom teaching and learning. Before the accelerated schools process, art was taking place only in isolation and on a "hit and miss" level. One teacher reflected on art throughout the school by stating, "School-wide more teachers are doing creative activities. More art centers are used."

Third, heterogeneous groupings emerged as a result of art related activities replacing homogeneous groupings. Franklin (1994) sees that the challenge for school administrators and teachers is "...to develop organizational schemes that possess sufficient flexibility to provide for the heterogeneous population" (p. 152). Reform initiatives toward a restructured school will take this route rather than with segregated programs.

Fourth, through the use of integrated art activities teachers were observed to recognize children's talents and strengths. It was apparent in both observations and interviews that teachers were beginning to use the talents, special skills, and interests of the children as an approach to make learning fun and motivating. Levin (1991) explains:

> The strengths of 'at-risk' students are often overlooked because these students are perceived as lacking the learning behaviors associated with middle-class students rather than being seen as having unique and different assets which can be used to accelerate their learning. (p. 14).

Therefore, teacher inquiry on the cadre level contributed to changes in the curriculum and instruction. A holistic curriculum was the result in which either fragmented programs or non-existent programs were developed and implemented to meet children's needs as well as to build on

their strengths and talents. As an external force, the central office noticed the efforts of the school that highlighted very creative and innovative classroom projects. The efforts of the teachers were supported by the central office. Teachers were provided release time to attend workshops. Additional increments in salaries were also provided as an incentive to attend inservices that would enhance creativity.

Local businesses were also inclined to be partners with the school in support of these new initiatives. Some innovative teachings projects were assisted financially. Finally, parents became more involved because they recognized the new achievements of the children. Higher parental attendance was observed at meetings and other functions.

Evidence was apparent that inquiry in teachers' work played an integral role both internally and externally. The inquiry process created the opportunities for the teachers and the principal to recognize to build innovative and creative activities. Signs of unity through teachers' sharing of ideas and reflecting on what works with children began to help teachers to "unfreeze." Argyris, Putman, and Smith (1985) view this "unfreezing" as a healthy sign that teachers can discover dysfunctional patterns that hinder communication. Teachers were freer to take risks to communicate and seek out alternatives for change because the new principal saw her role as a facilitator and team player. As a result, the teachers were provided more opportunities to be innovative internally in the classroom, and externally at school-wide levels.

In summary, findings indicate that substantial change took place in the area of traditional isolation of the teachers from autonomy in the classroom to a more innovative sharing of teaching strategies particularly those that involved artistic and creative processes. Teachers who had knowledge about art instruction helped those who did not. Teachers also felt free to combine

lessons and to work with each other's students. Internal reforms that took place included: 1) The empowerment of teachers by the principal, 2) teachers breaking away from the traditional closed classroom door, 3) teachers seizing opportunities to test ways to making learning more active, and 4) teachers creating varied strategies to meet the diverse strengths of students, often through the arts. External reforms that took place included: 1) The central office supported measures for change by giving teachers released time and additional pay to attend workshops, and 2) local businesses supported measures to fund innovative teacher projects.

IMPLICATIONS

The primary focus at the outset of the study was to examine how the use of the inquiry process to redesign and implement innovative teaching practices in the classroom and school programs. The assumptions presented in the theoretical framework looked at how Dewey and Levin and other educators viewed innovative strategies to enrich education for all children. Our purpose in the study was to "paint a portrait" of the school by describing and documenting the uses and benefits of such creative strategies and the impact of the Accelerated Schools Project. What could these seemingly different but sympathetic influences have in common? Based on literature, both purport to initiate changes in the curriculum. The assumptions of innovative and integrated arts and the Accelerated Schools Project are viewed as the essential strategies ingredients for influencing the shape of schooling. From evidence discussed in the analysis, this study maintains that a school oriented toward transformation of the curriculum needs to alter the work and roles of teachers using inquiry at both the classroom and cadre levels. Such inquiry appears to be integral to the transformation of teaching and learning. Work and roles of the teachers need to be geared toward connecting fragmented programs and changing attitudes of

segregating children because they are different. Murphy (1991) and Fullan and Stiegelbauer (1991) argue that a connected curriculum with a focus towards meaningful teaching and learning is a key ingredient for transforming schooling. For this school, such a teaching and learning approach interwoven in creativity was the litmus test for transformation of the curriculum.

The necessary resources provided by the teachers, the principal, and school district ensured that the classrooms and the school facility created the environment for innovative teaching and learning. The Accelerated Schools Project validated those innovative approaches. The embedded perceptions of the teachers, principal, and school district played a role in shaping the schooling the children received. The final strokes of the portrait of Harper Elementary are focused upon creativity and innovation as the nexus in the relationship between the teachers' work and transformation of teaching and learning.

As noted in the study, the entire school faculty and central office need to reflect and design an educational environment that sets the stage for access to a variety of creativity, art media, non-traditional classroom centers, and a flexible schedule that integrates and connects all programs. Such an educational setting indicates that the teachers and the administrators need to perceive the children as having the potential to use innovative and art media for many ways of knowing and understanding. Campbell, Campbell, and Dickinson (1999) argue that restricting educational programs to only the linguistic and mathematical minimizes other forms of knowing.

Classroom teachers and school administrators proactive in designing and implementing innovative programs, can engage children in hands-on, creative, and critical thinking activities. Gardner (1991) in his multiple intelligence theory argues that many ways of knowing generate new ways of solving problems. In this way, classroom practices begin to reflect the transition

from traditional approaches to more accelerated non-traditional ones. Regimented classrooms can stifle creativity, excitement, and motivation in the discovery of learning (Murphy, 1991). The entire school community's way of thinking and acting needs to change in order for transformation to occur (Fullan & Stiegelbauer, 1991).

The findings of our study may provide more fruitful influence on the direction of educational administration. Innovation as the nexus between the teachers' work and transformation provides the capacity to guide and inform administrators to take the risk to collaborate with the teachers in transforming curricula. For administrators, this study sheds light on the path that transformation takes in a school setting. The study illuminates the importance of the principal's role in empowering and liberating teachers in their work toward this transformation. The findings included in this study also encourage central office to be facilitators in liberating teachers in the workplace to implement non-traditional approaches with all the children.

Results in this study have provided enough data to warrant additional research to assist teachers in classrooms as well as administrators in preparing for transforming education. In the area of inquiry, future research might take the form of examining more closely the influence on classroom practices for encouraging student inquiry. Continued research on the relationship between teachers' conceptions of children, teachers' work and the transformaiton of teaching and learning is recommended. Such research may provide educators with a deeper insight into how teachers' conceptions limit or broaden the ways they work with children as the new millennium becomes a reality.

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